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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,816	03/28/2006	Hiroyuki Yoshikawa	L9289.06138	9347
52989	7590	12/17/2008		
Dickinson Wright PLLC James E. Ledbetter, Esq. International Square 1875 Eye Street, N.W., Suite 1200 Washington, DC 20006			EXAMINER TRAN, KHANH C	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 12/17/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/573,816

**Applicant(s)**

YOSHIKAWA ET AL.

**Examiner**

KHANH C. TRAN

**Art Unit**

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,5 and 6 is/are rejected.  
7) ☒ Claim(s) 2-4 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 28 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claim(s) 6 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staszewski et al. U.S. Patent Application Publication No. US 2004/0151257 A1.

Regarding claim 1, referring to FIG. 1, Staszewski et al. teaches in FIG. 1 a transceiver system 10 including a digital baseband processor 12 providing a digital phase input to the transmitter path 14 along a phase modulated (PM) path (see paragraph [0015]), and a second digital input to the amplitude modulated (AM) path to control the amplitude of the output of the power amplifier 18 (see paragraph [0017]).

Staszewski et al. does not explicitly disclose an amplitude information section and a phase information acquisition section as claimed in the pending claim.

However, as recited above, because the digital baseband processor 12 providing a digital phase input to the transmitter path 14 along a phase modulated (PM) path and a second digital input to the amplitude modulated (AM) path to control the amplitude of the output of the power amplifier 18, one of ordinary skill in the art at the time the invention was made would have been recognized that the digital baseband processor 12 would include an amplitude information section and a phase information acquisition section for producing digital inputs to the AM and PM paths.

In paragraph [0019], Staszewski et al. further discloses in the receiver path 16, the signal is processed to convert the signal into a digital signal that is suitable for digital processing. The digital signal produced by the receiver path 16 is then provided to a signal evaluator 40 associated with the digital processor 12. The signal evaluator 40 measures the spectral regrowth of the signal as the power of the signal in frequency channels outside of a desired frequency range or channel. Appropriate predistortion parameters for the digital predistorter 32 can be calculated from the measured signal power to mitigate this spectral regrowth. In light of the foregoing disclosure, the digital

predistorter 32 corresponds to the amplitude correction section claimed. The digital signal produced by the receiver path 16 is based on the phase modulated path.

Regarding claim 5, Staszewski et al. does not expressly disclose a polar loop modulation apparatus claimed.

However, referring to FIG. 1, because of the amplitude modulation path to control the amplitude of the output of the power amplifier 18 (see paragraph [0017]) and the phase modulated path to mitigate changes in the phase of the power amplifier output associated with variations of amplitude within the power amplifier output, one of ordinary skill in the art at the time the invention was made would have recognized that the amplitude modulation path and the phase modulated path constitute the polar loop modulation.

Regarding claim 6, claim is rejected on the same ground as for claim 1 because of similar scope.

### ***Allowable Subject Matter***

3. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bengtsson et al. U.S. Patent Application Publication No. US 2002/0071497 A1.

Shimizu U.S. Patent 6,914,943 B2.

Oishi et al. U.S. Patent 6,567,478 B2.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

***/KHANH C. TRAN/  
Primary Examiner, Art Unit 2611***